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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,717

06/12/2006

Shunsuke Toyoda

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EXAMINER

VELASQUEZ, VANESSA T

ART UNIT

PAPER NUMBER

1793

NOTIFICATION DATE

DELIVERY MODE

07/09/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,717	<b>Applicant(s)</b> TOYODA ET AL.	
	<b>Examiner</b> Vanessa Velasquez	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>June 12, 2006</u>   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Restriction*

Restriction is required under 35 U.S.C. 121 and 372. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

**Group I**, claims 1-3 and 6-8, drawn to a steel composition.

**Group II**, claims 4 and 9, drawn to a method for producing steel.

**Group III**, claims 5 and 10, drawn to a method for producing a steel tube.

The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Unity exists only when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding claimed technical features. "Special technical features" are defined as meaning those technical features that define a contribution which each of the inventions, considered as a whole, makes over the prior art" (Rule 13.2).

A review of U.S. Patent 6,632,296 issued to Yoshinaga demonstrates that the technical feature (i.e., the steel composition) does not define a contribution which each of the inventions, considered as a whole, makes over the prior art. Thus, lack of unity

becomes apparent *a posteriori*, i.e., after taking the prior art into consideration.

Accordingly, the prior art of the record supports the restriction of the claimed subject matter into the aforementioned groups.

**Applicant is advised that for the reply to this requirement to be complete, it must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

***Joint Inventors***

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Election by Telephone***

During a telephone conversation with Mr. Daniel Christenbury on May 29, 2008, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-3 and 6-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 4, 5, 9, and 10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Status of Claims***

Claims 1-3 and 6-8 are presented for examination.

***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been placed of record in the file.

### ***Information Disclosure Statement***

One (1) information disclosure statement (IDS) was received on June 12, 2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The IDS fails to comply with the provisions of 37 CFR 1.98, which requires a "concise explanation of the relevance, as it is presently understood by the individual designated in § 1.56(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language. The concise explanation may be either separate from applicant's specification or incorporated therein." An explanation of non-English references JP 6-264162, JP 10-88278, and JP 2003-321748 have not been provided by the Applicant. Therefore, said references will not be considered.

The Examiner wishes to point out a typographical error regarding reference JP 2000-248831. The correct document identifier is JP 2000-248331.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1793

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinaga et al. (US 6,632,296 B2).

Regarding Claims 1 and 6, Yoshinaga teaches a composition for a steel pipe. The pipe comprises the following elements, in percent by mass (col. 3, lines 1-9, 19-21, 26-44):

Element	Claims 1 and 6	US 6,632,296	Overlap
C	0.18-0.29	0.001-0.50	0.18-0.29
Si	0.06-0.45	0.001-2.5	0.06-0.45
Mn	0.91-1.85	0.01-3.0	0.91-1.85

Art Unit: 1793

Al	0.015-0.075	0.001-0.5	0.015-0.075
B	0.0001-0.0029	0.0001-0.01	0.0001-0.0029
Nb	0.001-0.019	≤ 0.15	0.001-0.019
Ti	0.001-0.029	≤ 0.2	0.001-0.029
Cr	0.001-0.195	0.001-2.5	0.001-0.195
Mo	0.001-0.195	0.001-2.5	0.001-0.195
P	≤ 0.019	0.001-0.2	0.001-0.019
S	≤ 0.0029	≤ 0.05	0-0.0029
N	≤ 0.0049	≤ 0.01	0-0.0049
O	≤ 0.0049	≤ 0.01	0-0.0049

The oxygen content is preferably no more than 0.01% because it decreases the formability of the steel (col. 7, lines 35-37). The overlap between the ranges taught by the prior art and recited in the claims is sufficient to establish a *prima facie* case of obviousness (MPEP § 2144.05 “Overlap of Ranges”).

Still regarding Claim 1, the excellent formability, fatigue endurance after quenching, low temperature toughness, and resistance to hydrogen embrittlement would be inherent to the steel taught by Yoshinaga because steel disclosed therein and in the claims are physically the same. It is understood that “a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present” (MPEP § 2112.01 “Composition Claims”).

Still regarding Claims 1 and 6, the steels in Yoshinaga are preferably at least 75 vol.% ferrite, as this ensures good formability (col. 12, lines 48-51), and have ferrite grains that are at least 10 microns, as this ensures good ductility (col. 12, lines 26-64).

Still regarding Claims 1 and 6, the claims recite limitations referring to a carbon equivalent and multiplying factors. It has been held that “there can be no patentability in



Art Unit: 1793

the discovery of a general formula" if the claimed composition has been taught in the prior art (*In re Cooper and Foley*, 57 USPQ 117).

Regarding Claims 2 and 7, the steel alloy of Yoshinaga may further comprise the following elements, in percent by mass (col. 3, lines 26-44):

Element	Claims 2 and 7	US 6,632,296	Overlap
Cu	0.001-0.175	0.001-2.5	0.001-0.175
Ni	0.001-0.145	0.001-2.5	0.001-0.145
V	0.001-0.029	0.0001-0.5	0.001-0.029

Regarding Claims 3 and 8, the steel alloy of Yoshinaga may further comprise the following element, in percent by mass (col. 3, lines 25-44):

Element	Claims 3 and 8	US 6,632,296	Overlap
Ca	0.001-0.029	0.0001-0.01	0.001-0.01

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa Velasquez whose telephone number is (571)270-3587. The examiner can normally be reached on Monday-Friday 8:30 AM-6:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

/Vanessa Velasquez/  
Examiner, Art Unit 1793